Solution:

Test I

1. Car 1

Tan θ = $\frac{opposite}{adjacent}$

$\tan(52)°$ **=** $\frac{95 m }{x}$

$\frac{\tan(52°)}{1}=\frac{95 m}{x}$ (cross multiplication)

$$\frac{95 m}{\tan(52°)}=\frac{\left(\tan(52°)\right)x}{\tan(52°)}$$

* 1. m = x

 Car 2

Tan θ = $\frac{opposite}{adjacent}$

$\tan(48)°$ **=** $\frac{95 m }{y}$

$\frac{\tan(48°)}{1}=\frac{95 m}{y}$ (cross multiplication)

$$\frac{95 m}{\tan(48°)}=\frac{\left(\tan(52°)\right) y}{\tan(52°)}$$

85.54 m = y

1. STEP 1:

$\frac{a}{Sin A}=\frac{c}{Sin B}$

 $\frac{152 m}{Sin 8°}=\frac{c}{Sin 64°}$(cross multiplication)

 $\frac{\left(Sin 8°\right) c}{Sin 8°}=\frac{\left(Sin 64°\right)(152 m)}{Sin 8°}$

**C = 981.63 m**

**STEP 2:**

Sin θ = $\frac{opposite}{hypotenuse}$

$Sin 72°$ **=** $\frac{x }{981.63 m}$(cross multiplication)

X = (Sin 72°) (981.63 m)

X = 933.59 m

 $\frac{a}{Sin A}=\frac{AB}{Sin C}$

 $\frac{200 m}{Sin 40°}=\frac{AB}{Sin 65°}$(cross multiplication)

 $\frac{\left(Sin 40°\right) AB}{Sin 40°}=\frac{\left(Sin 65°\right)(200 m)}{Sin 40°}$

**AB= 281.99m**

1.

Cos A = $\frac{b^{2}+ c^{2}-a^{2}}{2bc}$

Cos A = $\frac{36^{2}+ 28^{2}-45^{2}}{2(36)(28)}$

Cos A = $\frac{1296+ 784-2025}{2016}$

Cos A = $\frac{2084-2025}{2016}$

Cos A = $\frac{35}{2016}$

(Cos A)-1 = (0.02728174603)-1  (shift + cos + ans)

Cos A = 88.44°